

What is Claimed is:

1. A method of writing a servo pattern on a magnetic disc with a servo writer having an exciting current controller, comprising the steps of:

reading a magnetic reproduction signal based on a magnetic pattern recorded on the magnetic disc;

detecting and holding peak values of an amplitude of the magnetic reproduction signal;

normalizing the amplitude of the magnetic reproduction signal by calculating an average value of the magnetic reproduction signals corresponding to the magnetic recording heads based on the obtained peak values and dividing the amplitude value of each magnetic reproduction signal by the average; and

applying a correction value, which is the inverse of the normalized amplitude value, to the exciting current controller when the servo pattern is written on the magnetic disc so that the exciting current controller uniformly controls the exciting current applied to each of the magnetic recording heads.

2. The method according to claim 1, wherein the detecting step detects and holds the peak values of the amplitude values of a plurality of magnetic reproduction signals, and the normalizing step calculates and holds the average value thereof.

3. The method according to claim 1, wherein the detecting step detects positive peak values and negative peak values of the magnetic reproduction signals, and the normalizing step adds the positive and negative peak values to normalize the magnetic reproduction signals.

4. The method according to claim 2, wherein the detecting step detects positive peak values and negative peak values of the magnetic reproduction signals, and the normalizing step adds the positive and negative peak values to normalize the magnetic reproduction signals.

5. A servo writer for writing a servo pattern on a magnetic disc using a plurality of magnetic recording heads, comprising:

a magnetic reproducing head for reading a magnetic reproduction signal based on a magnetic pattern recorded on the magnetic disc;

a peak detector for detecting and holding peak values of an amplitude value of the magnetic reproduction signal read by the magnetic reproducing head;

an exciting current controller for applying exciting current to each of the magnetic recording heads to record the magnetic pattern on the magnetic disc; and

a CPU for controlling the exciting current controller to uniformly apply the exciting currents to the plurality of magnetic recording heads when recording the magnetic pattern on the magnetic disc by calculating the average value of the magnetic reproduction signals corresponding to the respective magnetic recording heads from the peak values obtained by the peak detector, dividing the amplitude value of each of the magnetic reproduction signals by the average value to normalize the amplitude value, and applying the correction value to the exciting current controller.

6. The servo writer according to claim 5, wherein the peak detector detects the peak values of the amplitude values of the plurality of magnetic reproduction signals, and calculates and holds the average value thereof.

7. The servo writer according to claim 5, wherein the peak detector detects and holds the positive peak values and negative peak values of the magnetic reproduction signals, and the CPU adds the positive and negative peak values for normalization.

8. The servo writer according to claim 6, wherein the peak detector detects and holds the positive peak values and negative peak values of the magnetic reproduction signals, and the CPU adds the positive and negative peak values for normalization.

9. A computer-readable storage medium storing a program for writing a servo pattern with a servo writer on a magnetic disc thereof using a plurality of magnetic recording heads thereof, the program containing instructions for:

reading a magnetic reproduction signal based on a magnetic pattern recorded on the magnetic disc by a magnetic reproducing head of the servo writer;

detecting and holding peak values of an amplitude value of the magnetic reproduction signal from a peak detector of the servo writer;

normalizing the amplitude value of the magnetic reproduction signal by calculating an average value of the magnetic reproduction signals corresponding to the magnetic recording heads from the obtained peak values and dividing the amplitude value of each magnetic reproduction signal by the average; and

applying a correction value, which is the inverse of the normalized amplitude value, to an exciting current controller of the servo writer when the servo pattern is written on the magnetic disc so that the exciting current controller uniformly applies the exciting current to the plurality of magnetic recording heads when recording the magnetic pattern.

10. The medium according to claim 9, wherein the detecting instruction detects the peak values of the amplitude values of the plurality of magnetic reproduction signals, and calculates and holds the average value thereof.

11. The medium according to claim 9, wherein the detecting instruction detects positive peak values and negative peak values of the magnetic reproduction signals, and the normalizing instruction adds the positive and negative peak values for normalization.

12. The medium according to claim 10, wherein the detecting instruction detects positive peak values and negative peak values of the magnetic reproduction signals, and the normalizing instruction adds the positive and negative peak values for normalization.